

## Title (en)

METHOD AND DEVICE FOR FLOW CONTROL OF A PERIODIC FLOW HEART PROSTHESIS.

## Title (de)

Verfahren und Vorrichtung zur Durchflussregulierung einer Herzprothese mit periodischem Durchfluss.

## Title (fr)

PROCEDE ET DISPOSITIF DE REGULATION DE DEBIT D'UNE PROTHESE CARDIAQUE A DEBIT PERIODIQUE.

## Publication

**EP 0513176 B1 19940126 (FR)**

## Application

**EP 91904121 A 19910208**

## Priority

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- FR 9001851 A 19900209

## Abstract (en)

[origin: WO9112035A1] A method and a device for matching the blood flow rate in a heart prosthesis driven by an electrical actuator (18) with the available flow in the patient's venous return. A device comprises a sensor (11) for measuring a physical operational parameter of the prosthesis, of which the pass-band extends beyond the variation frequency of the blood flow, and includes a device (10) for determining the position of the prosthesis, a central processor (15) receiving signals from the sensor (11) and the device (10) and controlling a supply means (5) of the actuator, and a memory (16) for storing the normal values of the physical operational parameter of the prosthesis. The device is designed in particular for monitoring the operation of human heart prostheses.

## IPC 1-7

**A61M 1/10; A61M 1/12**

## IPC 8 full level

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## Citation (examination)

- IEEE Transactions on Biomedical Engineering, volume 37, No. 2, February 1990, IEEE, (New York, US), W.J. Weiss et al.: "Permanent circulatory support systems at the Pennsylvania State University", pages 138 - 144 see page 138, right-hand column, line 1 - page 139, left-hand column, line 43; figure 3
- IEEE Engineering in Medicine and Biology, volume 5, No. 1, March 1986, IEEE, (New York, US), D. J. Farrar et al. : "Control modes of a clinical ventricular assist device", pages 19 - 25 see page 20, lines 11 - 55; figure 2
- IEEE Proceedings of the Seventh Annual Conference of the IEEE/Engineering in Medicine and Biology Society, Chicago, Illinois, 27-30 September 1985, volume 2, No. CH 2198-0/85, IEEE, (New York, US), A.L. Oslan et al.: "Non-percutaneous monitoring of a permanently implanted ventricular assist system", pages 819 - 823 see page 819, left-hand column, line 1 - right-hand column, line 26; figure 1
- L'Onde Electrique, volume 67, No. 1, January 1987, (Paris, FR), P. Havlik et al.: "Coeur artificiel implantable entraîné par actionneur électrique asservi", pages 87-98 see page 91, figure 3; page 94, column 1, lines 42-56; page 95, column 1, lines 23-26

## Designated contracting state (EPC)

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